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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,743

02/13/2007

Udo-Martin Gomez

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2848

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EXAMINER

CHAPMAN JR, JOHN E

ART UNIT

PAPER NUMBER

2856

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10/07/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,743	<b>Applicant(s)</b> GOMEZ ET AL.	
	<b>Examiner</b> John E. Chapman	<b>Art Unit</b> 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 11-24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The embodiment of the yaw rate sensor according to the invention in Fig. 2 is unclear. Comb drive (6) of the drive element and quadrature compensation structures (8, 9) of the Coriolis element appear to be located on the same element, rather than located on different elements (1a, 2a) connected by a U-shaped spring (4) as shown in Fig. 1. Consequently, it is not clear whether the drive element and Coriolis element comprise a single element or separate elements. Insofar as the drive element (1a) in Fig. 1 is incapable of motion in the detection direction (Y), it is not evident that the Coriolis element in Fig. 2 is capable of “deflection . . . in a second axis that is perpendicular to the first axis.” Likewise it is not clear in the other disclosed embodiments of the yaw rate sensor according to the invention in Figs. 3, 4 and 5 whether the drive element and Coriolis element comprise a single element or separate elements. Insofar as the drive element and the Coriolis element comprise a single element, it is not evident that the

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Coriolis element is capable of “deflection . . . in a second axis that is perpendicular to the first axis.”

Regarding claim 19, it is not clear what is meant by “electromechanical multiplication.” While a signal multiplier (204) in Fig. 2 is disclosed for multiplying the output signal (201a) and the voltage signal (203a), it is not clear that the multiplier (204) is an electromechanical device. Nor is it clear that the multiplier (204) has a “multiplicand including a signal having the frequency of the oscillation of the drive element, and a multiplier including a signal having the frequency of the oscillation of the drive element with a phase shift to a multiplicand.” Nor is it clear that any other element(s) has a “multiplicand including a signal having the frequency of the oscillation of the drive element, and a multiplier including a signal having the frequency of the oscillation of the drive element with a phase shift to a multiplicand.” Consequently, it is not clear how to make the claimed device having “an electromechanical multiplication.”

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 19 and 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 is unclear. It is not clear what is meant by “electromechanical multiplication.” In addition, it is not clear whether the “signal having the frequency of the oscillation of the drive element” recited in lines 3-4 is the same as, or different from, the “signal having the frequency of

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the oscillation of the drive element with a phase shift to a multiplicand” recited in lines 4-5. It is not clear which embodiment(s) claim 19 reads upon. While a phase shifted signal (201a) is provided as a multiplicand to a multiplier (204) in Fig. 2, it is not at the frequency of the oscillation of the drive element. The signal (200a) provided as a multiplicand to a multiplier (204) in Fig. 3 is not phase shifted. Likewise in Figs. 4 and 5. An identification and explanation of which embodiment(s) claim 19 reads upon should be provided.

Regarding claim 21, lines 4-5 recite that the force-conveying arrangement indirectly conveys the dynamic action between the substrate and the Coriolis element, whereas lines 10-11 recite that the force-conveying arrangement directly conveys the dynamic action between the substrate and the Coriolis element. It is not clear how the force-conveying arrangement both indirectly and directly conveys the dynamic action between the substrate and the Coriolis element

Regarding claim 22, note the above remarks regarding claim 19.

5. Applicant's arguments filed June 30, 2009 have been fully considered but they are not persuasive. Applicant asserts that Figs. 2-5 are embodiments of a yaw rate sensor without a U-shaped spring and that one of ordinary skill in the art would be enabled to practice the claimed subject matter without the embodiment showing a U-shaped spring, as in Figs. 2-5. Applicant fails to provide an explanation as to how the embodiments of Figs. 2-5 can possibly function as a yaw rate sensor without a U-shaped spring connecting the drive element and the Coriolis element. If the drive element in Fig. 2 is attached to the substrate in the same manner as the drive element (1a) in Fig. 1, then the Coriolis element in Fig. 2 would be incapable of motion in

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the detection direction in response to forces caused by Coriolis acceleration. Consequently, the Coriolis element would be incapable of causing the detection element in Fig. 2 to move in the detection direction. Consequently, a yaw rate sensor without a U-shaped spring connecting the drive element and the Coriolis element appears to be inoperative. Consequently, one of ordinary skill in the art would not be enabled to practice the claimed subject matter without the embodiment showing a U-shaped spring, as in Figs. 2-5. Applicant argues that the enablement test is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation. Applicant further argues that there are many factors to be considered in whether a specification satisfies the enablement requirement, *inter alia* the existence of working examples. There is reason to doubt that any of the disclosed embodiments in Figs. 2-5 are working examples, since in order to work a Coriolis element must deflect in a second axis that is substantially perpendicular to the drive axis of a drive element. Applicant does not provide any explanation as to how the Coriolis element in the embodiments of Figs. 2-5 can operate without a spring connection between the drive element and the Coriolis element. Applicant does argue that “the Office Action’s assertions are merely conclusory and do not address the issue of whether one having ordinary skill would have to unduly experiment to practice the claimed subject matter of the rejected claims -- *a proposition for which the Office bears the burden of proving a prima facie case as to the rejected claims.*” However, in order to make a rejection, the examiner needs only to establish a reasonable basis to question the enablement provided for the claimed invention. *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). In the present situation, the fact that a Coriolis element must be capable of “deflection . . . in a second

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axis that is perpendicular to the first axis” provides a reasonable basis to question the enablement provided for the claimed invention, since it is not apparent that the Coriolis element in the disclosed embodiments of Figs. 2-5 are capable of motion in a second axis that is perpendicular to the first axis. Furthermore, once the examiner has established a reasonable basis to question the enablement provided for the claimed invention, the burden falls on applicant to present persuasive arguments, supported by suitable proofs where necessary, that one skilled in the art would be able to make and use the claimed invention using the application as a guide. *In re Brandstadter*, 484 F.2d 1395, 1406-07, 179 USPQ 286, 294 (CCPA 1973). Applicant does not provide any explanation or demonstration as to how the Coriolis element in the embodiments of Figs. 2-5 can possibly operate without a spring connection between the drive element and the Coriolis element. Consequently, applicant has not provided any evidence that one skilled in the art would be able to make and use the claimed invention using the application as a guide.

Regarding claim 19, applicant asserts that page 3, lines 14-30, of the specification discloses how the frequency of the conveyed force action is generated by an electromechanical multiplication of the frequency of the oscillation of the drive element out of phase with itself. However, the description at page 3, lines 14-20, is insufficient for the reasons indicated above. Applicant does not provide any identification or explanation of which embodiment(s) claim 19 reads upon. Consequently, applicant has not provided any evidence that one skilled in the art would be able to make and use the claimed invention using the application as a guide, or that one of ordinary skill in the art would understand the scope of what is being claimed.

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6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John E Chapman/  
Primary Examiner  
Art Unit 2856

<b><i>Index of Claims</i></b>  	<b>Application/Control No.</b>  10577743	<b>Applicant(s)/Patent Under Reexamination</b>  GOMEZ ET AL.
	<b>Examiner</b>  John E Chapman	<b>Art Unit</b>  2856

✓	<b>Rejected</b>	-	<b>Cancelled</b>	N	<b>Non-Elected</b>	A	<b>Appeal</b>
=	<b>Allowed</b>	÷	<b>Restricted</b>	I	<b>Interference</b>	O	<b>Objected</b>

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant				<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
CLAIM		DATE							
Final	Original	04/01/2009	10/05/2009						
	1	-	-						
	2	-	-						
	3	-	-						
	4	-	-						
	5	-	-						
	6	-	-						
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	8	-	-						
	9	-	-						
	10	-	-						
	11	✓	✓						
	12	✓	✓						
	13	✓	✓						
	14	✓	✓						
	15	✓	✓						
	16	✓	✓						
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